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ABSTRACT

A general rationale and a specific blueprint for developing curriculum are presented. (See TM 001 363 for description of total project; for other related documents, see TM 001 160, TM 001 364-373.) (MS)

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INTENSIFICATION of the LEARNING PROCESS

A SERIES OF REPORTS
DESIGNED FOR CLASSROOM USE

REPORT NO. 10

PROTOTYPE CURRICULUM GUIDES

AN ESEA TITLE III PROJECT

BUCKS COUNTY PUBLIC SCHOOLS
DIVISION OF CURRICULUM AND INSTRUCTION SERVICES

FEBRUARY, 1970

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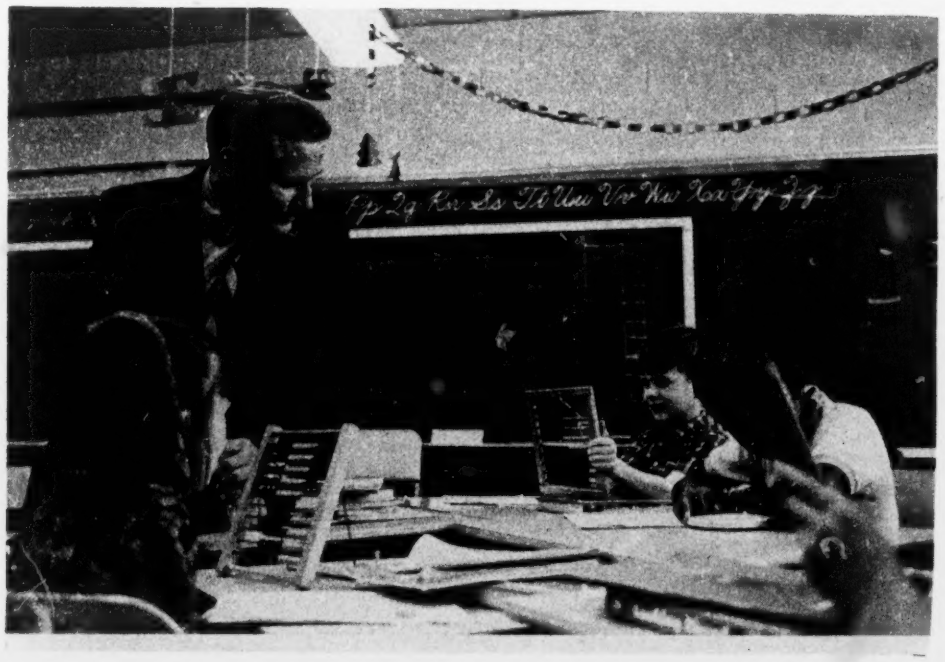
PERSONALIZING EDUCATIONAL PRESCRIPTIONS



AN ESEA TITLE III PROJECT
PRODUCED BY
BUCKS COUNTY PUBLIC SCHOOLS
COUNTY ADMINISTRATION BUILDING
DOYLESTOWN, PENNSYLVANIA 18901

PREFACE

Traditionally the Bucks County Schools have been in the forefront of promising educational practices. Therefore, it came as no surprise that the PEP Program was funded by the Federal Government; it was equally reassuring that the NATION'S SCHOOLS identified Bucks County's "Intensification of the Learning Process" as one of the twelve most innovative proposals in the Country.

While this Program may have used a new approach, educators the World over have been giving lip-service for years to the need for personalizing education. In a day and age when we are surrounded by mechanized inventions of all sorts, it becomes even more important for us to preserve the human element related to the teaching-learning process.

The primary goal of the PEP Program is the development of educational prescriptions--prescriptions which are the result of bringing diagnostic services and multi-media services into harmonious relationship as they focus on the individual needs of youth. The success of the venture is tied to our most important educational product--the child himself. With this focus we believe administrative and other supportive services can aid the teacher so that she can directly fit the educational diet to the needs of individual students.

Dr. George E. Raab
Superintendent
Bucks County Public Schools

REQUESTING THE REPORTS

The following reports reflect the views, principles, processes and products used in the dissemination of information about the Bucks County Project for the Intensification of the Learning Process. These reports may be used as a framework for schools developing personalized educational prescriptions for its primary elementary children.

There are ten individual reports. Rather than combine all into one, it was decided to disseminate individual reports. In this way, persons interested in any one individual report may request and receive it without going through a larger document.

Each report is described below by report number, title, and content summary:

Report No. 1 — Project Description

Describes the project goals, objectives, and team involved. Explains briefly the PEP approach to learning diagnosis and use of multi-level stimuli. Also includes a final summary report as well as changes in retrospect.

Report No. 2 — Research Findings

- Part A — Design to Measure the Effectiveness of Personalized Educational Prescriptions in a Pilot Second Grade Classroom
- Part B — Design to Measure the Effectiveness of Personalized Educational Prescriptions in the Second Year of a Pilot Study
- Part C — Analysis of Pre-Test and Post-Test Data

Report No. 2 cont'd.

Part I An Analysis of Data

Part II Homogeneity/Heterogeneity of Group Variances on Pre and Post Tests

Report No. 3

Gross Motor Performance Scale

- Introduction
- Test Administration
- Reliability of Test Items
- Interpretation of Test Scores
- Suggested Circuits for Improving Performance in Tested Areas
- Physical Education Curriculum Guide

Report No. 4

Diagnostic Instruments

- Learner State Check List
- Behavioral Objectives Evaluation Response Form

Report No. 5

Pupil Description Worksheet

- Introduction
- User's Manual
- The Worksheet
- Response Sheet
- Class Pupil Profile Grade 2
- Class Pupil Profile Grade 3
- Initial Personalized Educational Prescription
- Data Collection and Processing

Report No. 6

Educational Grouping Questionnaire

- A Classification of Children of Elementary School Age
- EGQ Manual
- EGQ Instrument
- Reports Provided by Computer Programs for the EGQ System
- Psychological Categories
- Sample Print-Out
- Recommendations for Future Development

Report No. 7	Diagnostic Instruments
	Visual Performance Screening Test
	Observing the Learner
	Questionnaire - Parent
Report No. 8	Automated Instructional Resources Retrieval System
	How to Use the AIRRS Thesaurus
	The Thesaurus
Report No. 8a	AIRRS Supplement
	Preface
	Why a Thesaurus
	Format of Document Record
	Present Status
Report No. 9	Curriculum Resources Center
Report No. 10	Prototype Curriculum Guides
	Mathematics
	Language Arts
	Science
	Social Studies

Each of the above reports are products related to the two objectives of the Intensification of the Learning Process, better known as Personalizing Educational Prescriptions (PEP) project.

1. The improvement of the diagnostic process with primary emphasis on the development of personalized educational prescriptions for all pupils.
2. The improvement and expansion of multi-media services for all pupils.

Bucks County Public Schools

Project for the

I N T E N S I F I C A T I O N O F T H E L E A R N I N G P R O C E S S

Report No. 10

PROTOTYPE CURRICULUM GUIDES

ACKNOWLEDGEMENT

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GENERAL CURRICULUM RATIONALE

The primary objective of this pilot project has been to determine the feasibility and to lay the groundwork for a more extensive development of innovative curriculum methods and materials for the intensification of certain aspects of the learning experiences of children in elementary schools.

The curriculum to be produced is conceived not only as an experimental one but, also, essentially a model system. From the outset, it was acknowledged, that the task of designing, developing and perfecting a curriculum embodying these ideas was an enormous undertaking - one which would take many years of trial and error. With materials now being used experimentally in four grades, the directors of the program have become concerned with the problems of teacher-training and classroom evaluation. Specialists are at work in these two areas developing ways of teaching their objectives with large numbers of individuals. They are also developing new approaches that will yield more meaningful results then do the methods now in common practice in our schools.

The area of values is of great and continuing concern to the teachers and to the project staff. At the onset of the project, the teachers were confused as to what values were and how they should be presented to the children in their classrooms. The project staff predicted that this would be an area of grave concern and, consequently, they placed a great deal of emphasis upon it. This deep concern was justified and it proved to be entirely helpful as was indicated by some of the teachers' comments. One teacher exclaimed, "I feel tongue-tied when I talk about values because I'm afraid I will say the wrong thing." It was apparent that teachers often had not faced their own values, nor had they thought enough about the differences among the values held by the children that made up their classes.

The following guidelines have governed the initial stage of curriculum development in the pilot project:

- curriculum format - to be written in terms of behavioral objectives with pre-assessment, teacher strategy, book/non-book media, pupil learning experiences, curriculum sequencing factor and post assessment provided;

- pupil learning experience - experience to be written in terms of learning modalities i.e., visual, kinesthetic; auditory, tactile or combinations of two or more. The modality for each child is provided the curriculum specialists via the personalized education prescription;

- curriculum sequencing factor - an attempt has been made to provide a sequencing of the curriculum areas in order that the learning process be a continuous experience;

- behavioral objectives - behavioral objectives for the project have been written in terms of;

  a. identification of the learner
  b. learner behavior
  c. conditions for learning
  d. performance level;

- taxonomy - behavioral objectives are coded according to Bloom's taxonomy: cognitive and affective domain;

- sequencing of behavioral objectives in curriculum areas - an attempt was made to sequence common behavioral objectives, e.g. When the concept of time is introduced, it was found that each of the curriculum specialists had written a behavioral objective to demonstrate the pupils' behavior. We

decided to record one behavioral objective rather than four;

- interaction logs are kept after meeting with the pilot teachers and master teachers;

- materials, book/non-book, are evaluated as to their appropriateness in carrying out the stated behavioral objectives.

As a team of curriculum consultants, we agreed that there would be a considerable amount of work to be accomplished in our efforts to sequence curriculum format and behavioral objectives. It is generally felt that the idea of sequencing would assist teachers in viewing learning as a continuous experience rather than thirty minutes of social studies or forty-five minutes of math. To this end, our energies are dedicated.

A BLUEPRINT FOR DEVELOPING CURRICULUM

We entered our planning for the PEP Project by considering three important factors:

1. adaptation of the existing curriculum
2. curriculum based on diagnostic data on each student
3. an attitude that a wide range of book and non-book media would be used.

In order to implement the curriculum, the following four phases of development are considered as a blueprint for lesson planning and in writing personalized education prescriptions.

"Phase I" Specification of Objectives

The broad goals of education, e.g., individual, social, emotional, physical, and esthetic development, communication, quantitative relationships and understanding the social and physical world are analyzed and stated in terms of desired behavioral outcomes. These are classified according to:

Knowledge and Understanding
Skills and Competencies
Attitudes and Interests
Specific Action Patterns

Each unit or lesson is planned with the long-range goals in mind; the immediate behavioral objectives for each lesson being consistent with and contributing to these broad goals of education. Optimal class size is not a consideration during this phase of planning.

"Phase II" Assessment and Specification of Pupil Needs

Pupil needs are determined by assessing the abilities, knowledge, skills, attitudes, interests and action patterns of each individual through testing, evaluating, observing, and appraising. Specific needs for each lesson are determined by pre-testing and/or evaluating before planning a particular lesson. Pupils are then grouped according to specific needs, or behavioral objectives, materials and techniques are modified to meet the range of differences. A gross decision is made as to whether group composition should

be relatively homogeneous or whether materials and techniques must meet a wider range of differences. Only in this aspect is class size a consideration during Phase II.

"Phase III" Teaching Strategy

Behavioral objectives and pupil needs having been determined and specified, selection of appropriate procedures for the lesson takes into consideration

Learning theory
Teaching talent
Time economy
Other presumed advantages
Size of the group. Considered at this point

only in cases where this is pre-determined.

The desired kind of interaction between teacher, pupils and materials determines the specific technique(s) to be employed, e.g., (based on learning modality i.e. visual, kinesthetic, tactile, auditory).

Lecture
Explanation
Demonstration
Story-telling
Debate
Panel discussion
Dramatic presentation
Written stories
Oral recitation
Written reports
Written tests
Independent reading or research
Use of film, radio, television, tape
Spelling or other machines
Question-answer
Discussion
Committee work
Oral drill or practice

It is believed that at this point, after the selection of the seemingly appropriate technique, the decision is reached as to the optimal class size for teaching the particular lesson (or portion of a lesson) under consideration.

Frequently a number of specific techniques are considered as they appear appropriate to the developmental sequence of a lesson, i.e.,

Initiation - orientational, motivational activities
Development - developmental activities
Culminating - concluding, summarizing, closure activities

Concurrently with the choice of instructional technique(s) (based on

learning modality) and class size the technical and mechanical aspects of the lesson are considered. Though these aspects are affected by class size, they are considered whether planning is for a large or small number of pupils.

1. Availability and reservations or space and equipment
2. Use and display of materials - visual, auditory, tactile
3. Provision of follow-up materials
4. Provision for efficient distribution and collection of materials
5. Provision for orderly movement of personnel and furniture
6. Seating Pattern
7. Disciplinary procedures
8. Eligibility or rigidity of schedule

"Phase IV" Evaluation

Each lesson sequence, or unit, is followed by an evaluation of pupil change in understanding, knowledge, skill, attitudes, interests, and action patterns from the pre-instruction to post-instruction level. The appropriate evaluation technique is selected to measure the desired change, as stated in the specific objectives of a given lesson. Evaluative techniques are either formal or informal in application and include:

1. Oral examination including questionnaire, quiz, interview, etc.
2. Objective examinations and scales including quizzes and mastery tests
3. Performance tests and scales involving manipulation of objects
4. Sociograms
5. Direct observation of behavior

Evaluation results are used in determining the objectives for the next lesson. Each lesson is also followed by an evaluation of the teaching treatment of a lesson, including the technique chosen, the size, composition and behavior of the group, and the technical and mechanical aspects of the lesson. The criteria for evaluation being the proposed rationale:

1. Meeting of individual needs
2. Evidence of pupil motivation
3. Evidence of pupil change
4. Use of teacher time
5. Use of teacher talent
6. Attainment of specific objectives

As an integral part of the program, the curriculum consultant meets once a week with the classroom teacher to evaluate curricular materials and non-

book media. Curricula for two week intervals is provided for classroom implementation depending on the needs and data on particular students or groups of students.

By using the blueprint described above, prototype curriculum guides for Personalizing Educational Prescriptions in Mathematics, Language Arts, Science, and Social Studies for elementary school children (K-3) were developed. Copies of these guides are available upon request. (A copy of a unit in the Social Studies is appended.)

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